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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/056,361 | 01/25/2002 | Yu-Wen Chen | U 013851-0 | 8039 |

7590 07/08/2004

Ladas & Parry
26 West 61st Street
New York, NY 10023

EXAMINER

TRINH, MINH N

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| ART UNIT | PAPER NUMBER |
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3729

DATE MAILED: 07/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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|------------------------------|--------------------------------------|------------------------------------|--|
| Office Action Summary | Application No. 10/056,361 | Applicant(s) CHEN ET AL. | |
| | Examiner Minh Trinh | Art Unit 3729 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Claim Objections

1. Claim 4 is objected to because of the following informalities: i.e., the phrase: "in any claims, 1, 2 and 3" (claim 4, line 1) is not clear as to exactly what claim of the three listed in which claim 4 is directed to. Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
3. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art (APA, Figs. 1-2 and the discussion in pages 1-3, under the "Related Art".

As applied to claim 1, APA discloses a carrier 1 for used in manufacturing a semiconductor encapsulant package (see Figs. 1-2), which comprises: at least one

receiving part 12 for used in receiving the semiconductor encapsulant package; and a plurality of positioning pins 13 protruding upwards from an edge of the receiving part for used in positioning the semiconductor encapsulant package on the carrier 1, APA does not clearly show an obtuse angle θ is being between the positioning pin and the receiving part. However, it is held to be a mere matter of design choice to choose any desired angle between the pin and the receiving part since applicant has not disclosed that the claimed of an obtuse angle between the pin and the receiving part is not a critical feature of the invention or would solve any stated problem or be useful for any particular purpose and it appears that the invention would perform equally well with the angular configurations as shown in Fig. 2 of the APA. Furthermore, it is inherent to use positioning pins with the similar configuration as described in details above for positioning and guiding the receiving part into a desired mounting position in an effectively manner.

Limitation of claim 2, it is known to the art that a fiction force and a gliding force would exist during the engaging process when the pin receiving and positioning of the semiconductor device. And the force toward the pin is being greater than the gliding force, etc. Note: because the prior art i.e., APA discloses every structure limitations of the present application, therefore it is capable of performing the function limitation including where a friction force and gliding force during the engaging process when the pin receiving and positioning of the semiconductor device as described above.

As applied to claims 3-5, and 8-12, regarding the obtuse angle as recited in these claims, it is held to be a mere matter of design choice to choose any desired angle

Art Unit: 3729

between the pin and the receiving part since applicant has not disclosed that the claimed of an obtuse angle between the pin and the receiving part is not a critical feature of the invention or would solve any stated problem or be useful for any particular purpose and it appears that the invention would perform equally well with teachings as shown in Figs. 1-2 of the APA. Note that it is also inherently to form an obtuse angle between the pin and the receiving part, i.e., in fact US 5,288, 698 discloses this concept (see Fig. 5 of the patent shows the pin 107 being associated with the receiving part 108 at an angle greater than 90°).

As applied to claim 6-7, Fig. 2 of APA disclose limitations of these claims including the positioning pin facing the semiconductor encapsulate package is slant and a second opposite surface is being vertical. Furthermore, it would have been an obvious matter of design choice to make the different portions of the component i.e., positioning pin as claimed by the application of whatever form or shape was desired or expedient. A change in form or shape is generally recognized as being within the level of ordinary skill in the art, absent any showing of unexpected results.

Limitations of claims 8-12 are also satisfied as discussed above.

Prior Art References


4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Prior art references are cited for their teaching of method of manufacturing semiconductor packages devices.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh Trinh whose telephone number is (703) 305-2887. The examiner can normally be reached on Monday -Thursday 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on (703) 308-1789. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Minh Trinh 7/7/04
Patent Examiner Group 3700

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